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HAYDEN, STONE & CO.
BOSTON NEW YORK
BRANCH OFFICES
DETROIT NEW HAVEN SPRINGFIELD
PORTLAND, ME.

ALASKA
GOLD MINES
COMPANY

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The EDITH *and* LORNE PIERCE
COLLECTION *of* CANADIANA

Queen's University at Kingston

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Alaska Gold Mines Company

President
MR. CHARLES HAYDEN

Vice-President and Managing Director
MR. D. C. JACKLING

DIRECTORS

MR. CHARLES HAYDEN
MR. C. M. MacNEILL
MR. EDWARD A. CLARK
MR. SHERWOOD ALDRICH
MR. D. C. JACKLING
MR. K. R. BABBITT
MR. WILLIAM H. COOLIDGE
MR. J. T. GILBERT
MR. F. H. GOFF

CAPITALIZATION

Shares Authorized and Outstanding
750,000

These shares are listed on the New York and Boston Stock Exchanges

1914

Alaska Gold Mines Company

THE **Alaska Gold Mines Company** was incorporated in 1912, to acquire, develop and operate a gold-mining property near Juneau, Alaska. Climatic conditions at this point are such as easily to permit of work the year round. The holdings of mining lands comprise 1,875 acres, covering the Gold Creek lode system for a length of over two miles across a mountain spur, which rises to a height of over 3,000 feet and is traversed by a series of strongly defined veins carrying low-grade milling gold ore. Mining had been carried on in a small way and at various points along the lode system for several years previously, and even under the most disadvantageous conditions, had shown a profit, but lack of resources had made it impossible to carry on operations on the scale which a property of this type demanded. There had been, however, sufficient development to demonstrate a large tonnage and it was only after the existence of such ore bodies had been confirmed by examination and reports by Messrs. D. C. Jackling and A. F. Holden, that the property was acquired by the present interests.

After making provision for payment in full for the property, a fund of $4,500,000 in cash, for the development and equipment of the property, was provided in the present incorporation, which permitted the adoption of very broad plans. A mill site of 335 acres on the shores of the Gastineau Channel was acquired, the preliminary work for the erection of a mill of 6,000 tons daily capacity was begun, the construction of a power development scheme, including the building of a 165-foot dam to furnish 6,000 h. p. for both mine and mill was started, while at the mine general development plan was inaugurated, including the sinking of a main vertical shaft and two auxiliary working shafts on the dip of the vein, the running of numerous drifts and cross-cuts, and, particularly, the driving of a tunnel more than two miles in length to serve as a main extraction way and permit the continuous transportation of ores direct to the mill by electric trains as well as the economical delivery of supplies to the mine.

At all points the plans were laid out with an eye to the ultimate treatment of a tonnage far in excess of the initial installation of 6,000 tons.

The proposition has been from the first under the direct personal supervision of Mr. D. C. Jackling, who has been responsible for the development and operating success of the Utah, Ray and Chino copper companies, which, under normal conditions, produce an aggregate of 300,000,000 pounds of copper annually, and pay $9,500,000 in dividends per annum.

In the two years that have intervened since the property came under the present control, a very efficient organization, under the local management of Mr. B. L. Thane, has been built up. The surface construction at both the power plant and reduction works has progressed in accordance with the schedule contemplating the commencement of productive operations during December of the current year; the metallurgical process has been perfected, while at the mine itself not only has the general work of opening this up so as to be in a position to furnish 6,000 tons per day on the completion of the mill gone on at a good rate, but incidental to this work there have followed developments of the ore bodies throughout which both as to size and quality have exceeded expectations, and have greatly increased the indicated tonnage and value of ore reserves.

In short, Alaska Gold Mines, according to the original plans, promises to begin actual operations not later than January 1, 1915, and to continue thereafter for a generation or more as a very large, and for a long time a rapidly increasing, producer of gold.

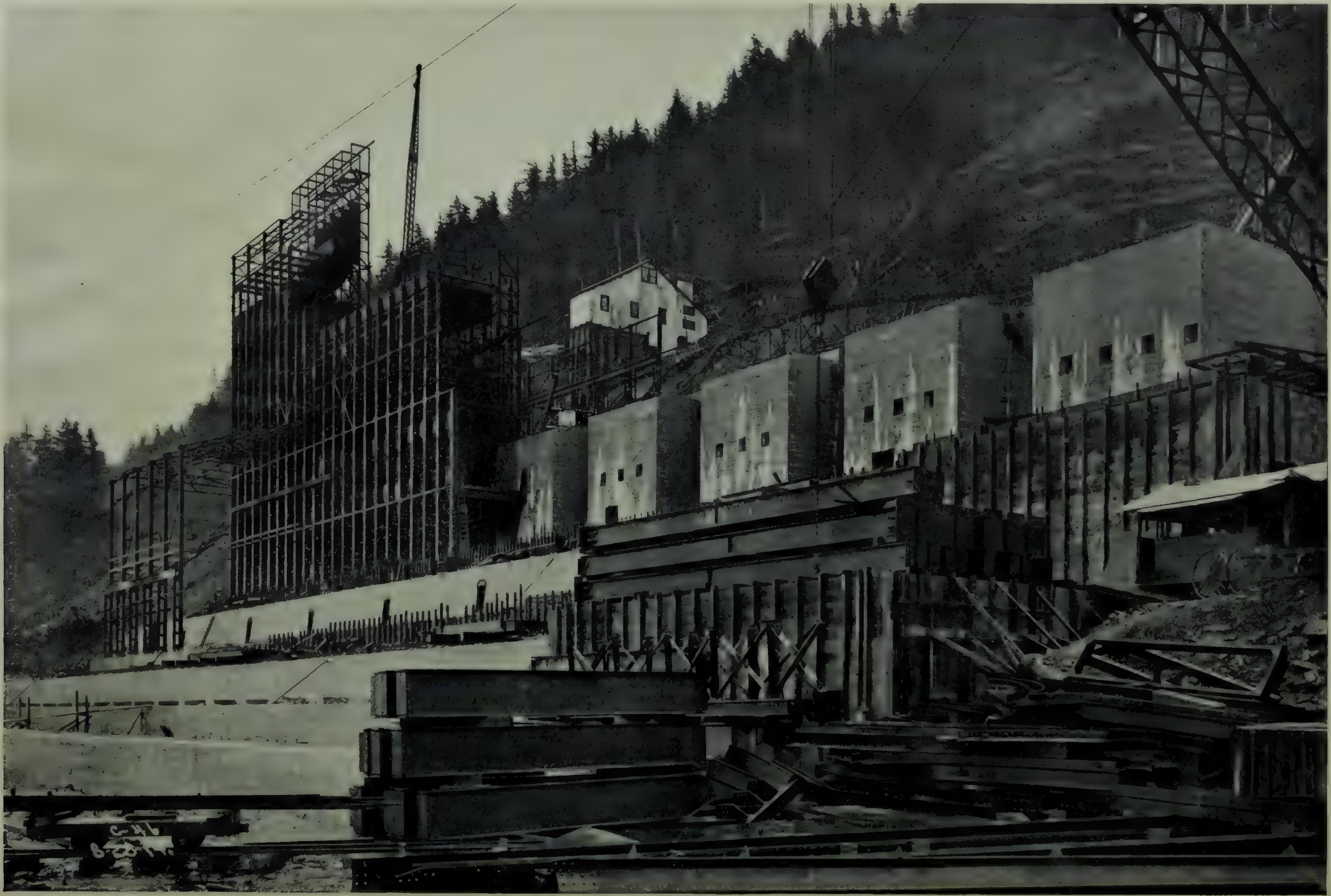
ORE RESERVES

At the time that the property was acquired by the present interests, the ore developments had been confined mostly to the main Perseverance lode, which had been opened near the western end of the group of claims, by the so-called "Alexander" cross-cut and levels driven along the vein at an average depth of about 1,300 feet on its dip, and for a distance of some 2,000 feet; by shorter drifts above this and by some limited but important workings on the eastern end of the vein system over a mile away from the main development. Basing their figures on these developments, on the character of the deposit and the evidence of surface and other developments, the engineers reported that 50,000,000 tons of commercially profitable ore were well assured.

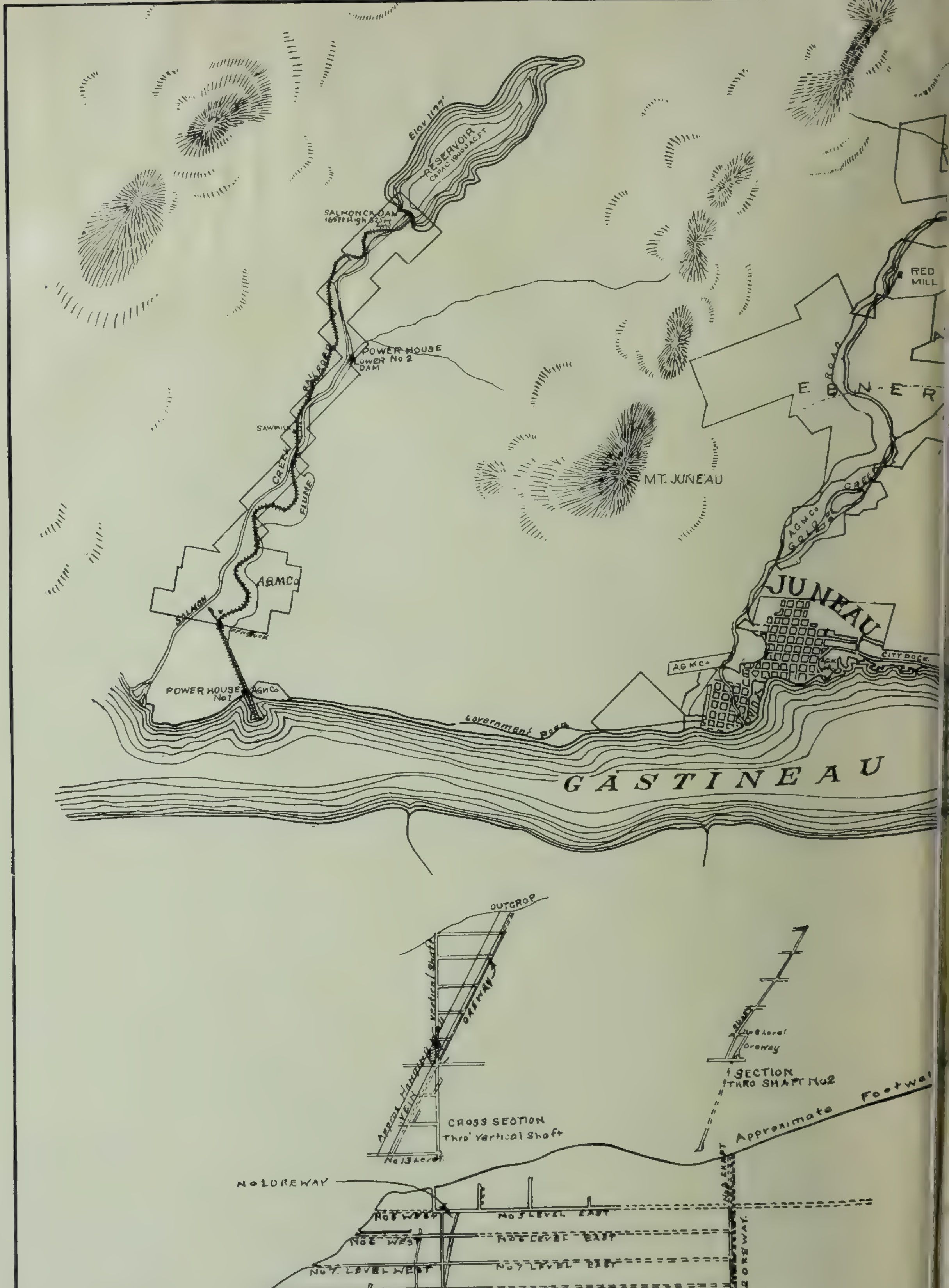
In the intervening two years the indicated extent of the ore body has greatly increased, both vertically and horizontally, as shown graphically on the accompanying chart. The Alexander, or No. 10, level has been extended to a total length of 5,000 feet, or about one-half the length of two miles on the vein system covered by the property. The upper levels have been pushed both east and west; two inclined working shafts are being driven, and one of them is practically completed from the surface to the level of the Sheep Creek adit, 700 feet on the dip of the vein below the 10th level. None of these shafts is for the hoisting of ore; actual mining will all be done by gravity.

The completion of the Sheep Creek Tunnel has been the main development feature. Entering the property from the eastern end, it has been driven for over 10,000 feet at an average depth of over 2,000 feet below the zone of upper developments. Altogether 22,137 feet of development work was done during 1913, and about 20,000 feet during the first eight months of 1914, or a total of over 42,000 feet since the beginning of most active mine development about the first of the year 1913. This total does not include several thousand feet of diamond drill work, which has been done to develop thickness and value of ore bodies, this method of development, where applicable, being much cheaper than cross-cutting in the regular way. Taking into consideration also the underground development done under the present ownership during the latter part of the year 1912, it may be said that whereas the total developments on the property at the time it was purchased by the present interests did not much exceed a mile in length, the additional developments executed in the last two years, added to the previously existing, constitute a total length of drifts, raises and cross-cuts approximating ten miles, and this does not include a mile or more of cross-cut development by diamond drilling. Considered in another way, the development underground since the properties were acquired has been increased in a general way from 2,000 to 5,000 feet longitudinally on the vein system, while in depth the increase has amounted to over 50% by the driving of the Sheep Creek adit, an average depth of 2,000 feet, as against the previous lowest, or Alexander, level at a depth of about 1,300 feet from the surface on the dip of the vein. Substantially all of these workings were productive of ore disclosures. Moreover, the Sheep Creek adit, at an average depth of 2,000 feet throughout the zone of greatest development and nearly 3,000 feet below the summit of the ridge, is still 800 feet above sea level, while directly across the Gastineau Channel the Alaska Treadwell workings in a somewhat similar formation are said to be still in good values at 1,800 feet below sea level.

Furthermore, in addition to the main Perseverance lode, at least two other separate and distinct lodes have been opened up, each of them showing widths of over 100 feet of commercial ore. The one of these of the greatest immediate importance has been opened on the 5th, or topmost level, of the mine upon which work is now being conducted. This has been well developed for a length of over 1,000 feet and cross-cut at a point still 1,000 feet further to the eastward, demonstrating a length here of over 2,000 feet. The 1,000 feet of this lode that has been more fully developed by cross-cutting and diamond drilling at intervals of about 100 feet has shown values substantially higher than the average of the main Perseverance vein. Numerous 100-foot cross-cuts and drill holes have shown values ranging between $2 and $3 per ton, and some of them in excess of the latter figure. The other vein, some 2,000 feet distant and also to the north, has a width of over 100 feet, but has so far been opened up only for a distance of some 600 feet. This deposit shows an average value of over



MILL—6000-ton section showing construction up to August 28, 1914


Elev 1197'
RESERVOIR
CAPAC 19000 AC FT
SALMON CK DAM
165 ft High 625 ft
POWER HOUSE
LOWER No 2
DAM
RAILROAD
SAWMILL
CREEK
FLUME
A G M Co
SALMON
PENSTOCK
POWER HOUSE
No 1
A G M Co
MT. JUNEAU
RED
MILL
E B N E R
Road
CREEK
A G M Co
Gold
JUNEAU
A G M Co
CITY DOCK
Government Road
GASTINEAU
OUTCROP
Approx Hanging wall vertical shaft
VEIN
OREWAY
CROSS SECTION
Thro' Vertical Shaft
No 13 Level
SHAFT
No 8 Level
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THRO SHAFT No 2
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No 2 OREWAY
No 1 OREWAY
No 5 WEST
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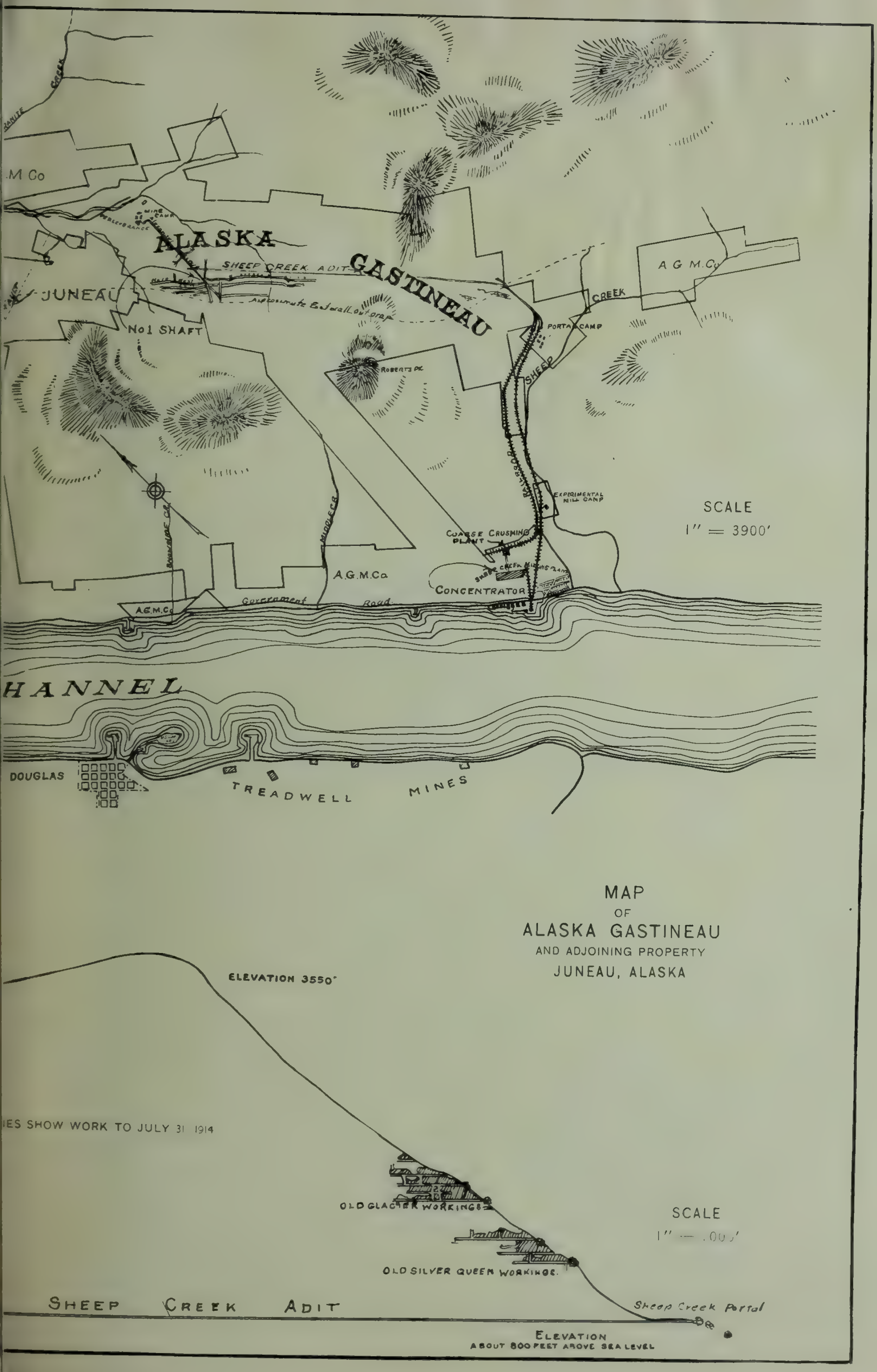
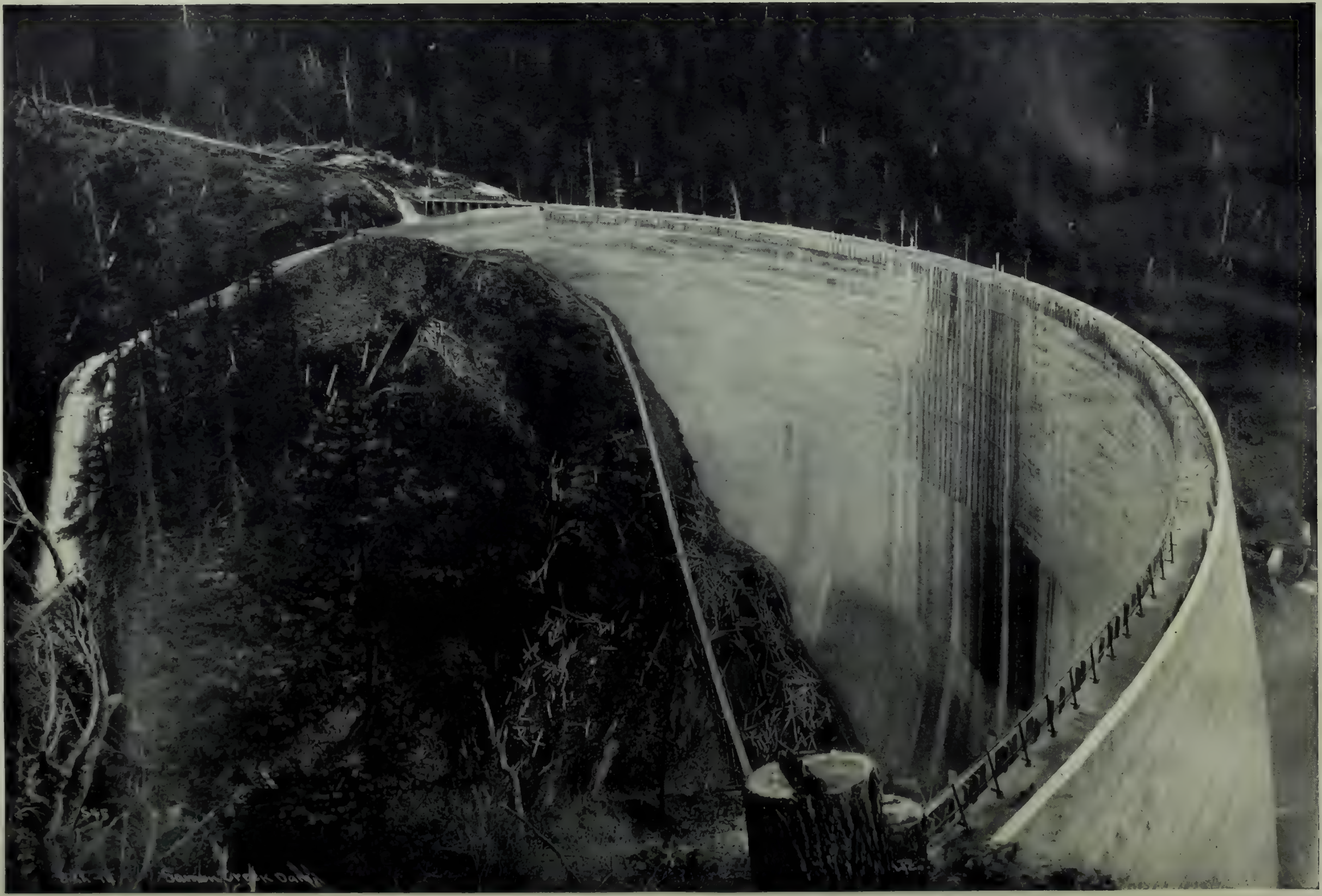
No 8 LEVEL WEST
No 8 LEVEL EAST
No 9 LEVEL WEST
No 9 LEVEL EAST
ALEXANDER CROSSCUT
No 10 LEVEL WEST
No 10 LEVEL EAST
WEST No 1 STOPE
EAST No 1 STOPE
EAST No 2 STOPE
No 1 SHAFT
No 13 LEVEL EAST
Note:- Dotted Lines Show Pr
LONGITUDINAL SECTION



MAP
OF
ALASKA GASTINEAU
AND ADJOINING PROPERTY
JUNEAU, ALASKA



SALMON CREEK DAM—700 feet long, 165 feet in height. View taken August 22, 1914

$1.50 per ton, or nearly as great as the recoverable value of the ores in the Perseverance vein, upon which the industry was initially based, and, therefore, well above the minimum value that will return substantial profits.

There is then excellent basis for the belief that the ore deposits of the Alaska Gold Mines property are such as to permit of development and production of vastly greater tonnages than first estimated, with the possibility that these tonnages may run into many times the original figures, thus constituting a basis of operation of a magnitude both as to time and quantity such as never has been before known in connection with a gold ore deposit of commercial value.

Not only has the extent of known ore bodies been greatly increased, but the developments of the last two years have proved that the values as originally estimated will be more than maintained. The original figure was a recoverable value of $1.50 per ton and net profit of 75 cents per ton. At numerous points throughout the mine, from the top to the bottom of it, tremendous ore bodies have been disclosed running well above this figure. The most notable of these has, as previously stated, been on the 5th level, where for 1,000 feet or more in length and for an average of about 100 feet in thickness, the values average well above $2 and in some places large quantities of $3 ore have been proved. The extension of developments in the Perseverance vein on the 10th level has also proved a zone for a length of over 800 feet, where the values likewise average between $2 and $3 per ton. Particularly on the 13th, or Sheep Creek Tunnel level, in the region where more or less extensive developments have been undertaken below the Alexander workings and in the vicinity of the main shaft, the ore bodies are found to exist in normal widths and to contain values fully up, as an average matter, to the standard of the upper levels. In fact, on this lowest level instances are not infrequent of ore occurrences carrying values as high as $100 a ton in narrow sections. These same persistent ore bodies of the Perseverance vein and immediately contiguous to it have been opened up on the 11th and 12th levels in a limited way, and as more or less extensive developments have been conducted on all the levels at intervals of 200 feet between the 10th level and the surface, the ore bodies have thus been proved continuous both as to size and value practically throughout the entire zone in which development work has been prosecuted up to this time. Thus, while the Alaska Gold Mines is essentially a low-grade proposition, the unmistakable existence of very large tonnages of ore of a much higher grade than was originally contemplated, assures at least the maintenance of profits up to the original estimates and a length of life and scope of operation which could scarcely have been even predicted at the time when comprehensive development and equipment of these properties was undertaken.

PROFITS

The mill of 6,000 tons daily capacity is nearing completion, and the first unit of it, having a daily capacity of 1,500 tons, will be in regular operation by or before the end of December, this year. According to present schedule, it is thought that the remaining three sections of the plant will be completed at intervals of a few weeks, so that the total plant may be expected to be operating at its full rated capacity of 6,000 tons per day by or about the middle of the year 1915. It is proper to say here that as a result of improvements and simplification of the metallurgical processes to be applied to the treatment of these ores, which have been devised since the original designs of the milling plant now under construction were completed, it is believed that this plant will have an economical capacity of about 8,000 tons per day instead of 6,000 tons, as originally contemplated, and that by the installation of a comparatively small amount of additional machinery, it may be brought up to a capacity of 10,000 tons per day without extension of buildings.

The installation of a water-power plant and system of distribution to provide a minimum of 6,000 h. p. and a maximum of 8,000 h. p. is practically completed. The principal feature of this development was the construction of a concrete dam 700 feet long on its crest and 165 feet high, to create a reservoir. This dam has been finished and on September 1 the water had already risen 62 feet. When filled by summer floods, the reservoir will contain sufficient water in storage to develop the entire milling and mining requirements at full capacity of the plant now under construction for a period of four months or more; this is longer than it will be necessary at any time to depend on power from stored waters, judging from the records of precipitation and water supply in this vicinity for several years past. The industry is, therefore, assured not only of a dependable and adequate, but of a very economical, power supply.

Throughout most of the two years since the acquisition of these properties, metallurgical investigations have been conducted on a substantial scale, and have as before indicated, resulted in decided improvements, not only as to recoveries, but also as to simplification of methods, which will be reflected in correspondingly decreased costs.

The original estimate of working costs of 75 cents per ton was based to a certain extent on the records of treatment of over 600,000 tons of ore in the old Perseverance mill. This cost was actually attained in that plant in connection with mining only its small capacity of 500 tons daily, coupled with the further disadvantage that it could only operate a few months in the year, due to lack of power and water during the severe winter months. It is to be remembered that this old plant was located at the mouth of the Alexander Tunnel, nearly three miles inland from the Gastineau Channel, and at a considerable elevation, and the effect of deep snows and intense cold made winter operation impossible; whereas the new plant is located on the shores of the Gastineau Channel at sea level. Here the winter temperatures are ordinarily moderate, due to the influence of warm ocean currents. The snowfall rarely exceeds a few inches, and then disappears rapidly, as is the case in other temperate climates.

Considering the question of costs from the viewpoint of improved conditions described, and the experience and indications of the extensive development work done during the last two years, it is believed that the actual results will be under, rather than over, the original estimated cost of 75 cents per ton to cover milling, mining and all charges of every nature. Such costs would, of course, be impossible only for the exceptionally favorable characteristics of the ore deposits, and the unusually simple metallurgical treatment required by these ores, coupled with the important factor of cheap power.

The plant, now under construction, when in full operation will produce a large revenue, but unquestionably, as has been the case with the copper companies whose affairs are directed under the same auspices, this first installation will prove but a starting point for larger operations. As soon as systematic operation and full production are effected in the new plant it will, doubtless, be decided to increase it, as rapidly as circumstances will permit, to at least 20,000 tons per day. The financing of this extension, for which an amount will be required proportionately much less than for the original installation, will be taken up when the proper time comes.

Those in control of and interested in this company may, therefore, look forward to operations within a few years' time at the rate of 7,000,000 tons per annum, at a profit, on normal grade ores, of at least 75 cents per ton, yielding an annual profit of approximately $5,000,000.

In this connection sight should not be lost of the very large quantity of higher grade ores that has been developed, as previously described, and of the very greatly increased net revenues to be derived from the treatment of such ores by themselves, or the tremendously increased ore reserves that would result from the admixture of these higher grade ores with other very large tonnages of ores lower grade than normal, which, if treated by themselves, would produce a lower rate of income. It will cost no more to treat a ton of rock from which a net recovery of $2 or $2.50 can be derived than it would to treat a ton from which the net recovery was only $1.50, this being the basis upon which the industry was instituted. All of the excess recovery gained, therefore, from higher grade ores becomes directly and wholly a credit to net revenues. In other words, a ton of ore yielding a net recovery of $2.25, instead of $1.50, at a working cost of 75 cents, would result in a net profit per ton of twice as great; and in the same way, a ton of $3 ore would yield three times as much net profit as a ton of ore producing the estimated normal recovery of $1.50. Or, stated in another way, each 25 cents per ton of additional value recovered from these ores would mean, on the 8,000-ton plant now under construction, an increase in net earnings of approximately $750,000 per year; or, on the basis of a plant of 20,000 tons daily capacity, which is ultimately contemplated, the same increase in recoverable value would result in an increased net earning of over $1,750,000 per annum. As has been indicated previously in this letter, there are large tonnages of ore—many million tons, in fact—already developed in this property, which will yield a net recovery and profit of from 50 cents to $1 per ton in excess of the 75 cent per ton profit, which was the estimated basis upon which we undertook the original financing of this company.

HAYDEN, STONE & CO.

October, 1914.